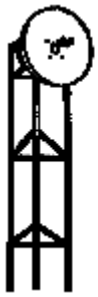

SAN BERNARDINO MICROWAVE SOCIETY, Incorporated

FORMED IN 1958

A NON-PROFIT AMATEUR TECHNICAL ORGANIZATION DEDICATED TO THE ADVANCEMENT OF COMMUNICATIONS ABOVE 1000 MC.

W6IFE Newsletter

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At the 5 December 2002 meeting of the SBMS will be a 5.7 GHz gear report and testing. We will have the mixer kits for the 24 GHz project, thanks to Dave and Ken. Next up is the PIC board and parts. The SBMS meets at the American Legion Hall 1024 Main Street (south of the 91 freeway) in Corona, CA at 1900 hours local time on the first Thursday of each month. Check out the SBMS web site at http://www.ham-radio.com/sbms/.

VPres Sez: Hi to all microwavers. This has been a busy month getting ready for the merry season. Lots of projects have made it over to my house for "tune up sessions". Glad the activity is presenting working rigs to the membership. Hope to have a number of you stop by the Glawson home 23437 E Amberwick Pl Diamond Bar around 5 pm for Christmas fun. Merry Christmas to everyone. Dave.

Last meeting- Mel, WA6JBD gave a talk on the operation of network analyzers and a demo testing member's parts using an HP8722. Thank you Mel. Greg Bailey, K6QPV of La Mesa (San Diego) was our visitor. Tony, KC6QHP from San Diego carried his 24 GHz rig for display. There was discussion of a new microwave contest to create more interest in the bands. Pat, N6RMJ is to take the collection of comments and create a plan for approval at the December meeting. Dave, WA6CGR is to work the papers for SBMS becoming an ARRL affiliated club. There was a list going around to sign up a work party to place the SBMS 1.2 to 2 GHz translator on Heaps Peak soon. 25 people present

Activity reported at the November SBMS meeting- Dave, WA6CGR spoke at the WSWSS Conference as did Pat, N6RMJ and Chip, N6CA; Glenn, KE6HPZ went to the WSWSS conference; Chip, N6CA went fly fishing; Larry, K6HLH went to the Microwave Update in Connecticut; Bill, WA6QYR put up a microwave log periodic antenna for testing with WA6EXV; Ed, W6OYJ went to the San Diego Ham Radio Roundup and on a trip to see colors in Maine; Kerry, N6IZW had some new synthesizers operating at 5, 10, and 13 GHz programmable down to 1 kHz steps; Joonho has a new call KG6MQS; Rick, W6ESS was testing a 3 GHz up and down converter; Tony, KC6QHP was visiting from San Diego; Dennis, WA6NIA did a microwave demo; John, KJ6HZ has a new 1.2 GHz rig and helped with the microwave demo; Kurt, K6RRA helped with the microwave demo and has VUCC pin and certificate #125; Chris, N9RIN worked on a mixer for his 10 GHz rig; Larry, N6PPO restored an antique radio; Pat, N6RMJ gave talk at WSWSS; Ed, K6ODV had visit by Murphy during the contest and is repairing his 1.2 GHz antennas; Ken, WB6DTA helped in 10 GHz demo at WSWSS and worked on 24 GHz parts kits; Chuck, WA6EXV worked on the SBMS translator and a report of specs is in this newsletter; Dick, WB6DNX has 10 MHz reference in a box now; Mike, W6YLZ has 48 v 6.5 amps for TWT; Mel. WA6JBD tested a TWT for W6YLZ; and Doug, K6JEY has a counter going to 26 GHz and had 2 432 EME contacts.

24 GHz Pcom update Several people are working to take the existing documentation and hardware and make some sensible information out of it. We seemed to have hit a roadblock on how to hook things up. Ken, WB6DTA is working on what he has for data. Kerry, N6IZW and Chuck WB6IGP will be working on a couple of working units built by Sam to make documentation on what should be connected where and how some of the original hardware was modified.

Scheduling:

Dec 14 Christmas Party at Dave WA6CGR's house 23437 E Amberwick Pl Diamond Bar, 5 pm.

Dec 25 Merry Christmas

1 Jan Happy New Year.

2 Jan Pat K6RMJ, WSJT-44 on EME

6 Feb Larry, K6HLH HP GPS freq reference

6 Mar TBD

4 Apr TBD

"Wants and Gots" for sale

Want 100 w 10 dB attenuator for 50 MHz Pat N6RMJ 661-264-1978

Want Gunnplexer for 10 and 24 GHz Larry N6PPO 818-917-4841

Want 2 WR-90 to N transitions Ed K6ODV 909-689-1339

Want WR-90 wave-guide slot carriage Joonho KG6MQS 310-813-9624

Want connection info for HP 10544 10 MHz reference John KJ6HZ 909-683-1434

For Sale- I have acquired a number of manufacturer's surplus, gold plated, panel mount, SMA connectors. All appear to be new, but they are in bulk, not individually packaged (opened for production line?). A few may be rejects due to rear solder pin breakage. Many have slight burrs on threads (may have been chucked into a three jaw holding fixture/jig); I test 100% for mating ease and as necessary run them through a die to

de-burr and have no problem mating to cables.

Majority of connectors are:

A. Female, 4 hole mount, 0.160 inch diameter x 0.540 inch long Teflon rear stem with 0.050 inch diameter x 0.155 inch long, tined solder pin projection. Good for probes or launchers and thick wall chassis's; cut to length you need. $0.50 each plus postage.

B. Female, 4-hole mount, 0.160-inch diameter x 0.085-inch long Teflon rear stem with 0.050-inch diameter flush pin (no pin projection). Use for thin wall chassis's. If you need a projecting pin a little work with an X-acto knife will be necessary. $0.50 each plus postage.

There are limited numbers of:

C. Female, 4 hole mount, with rear stem/pin diameters similar to A, but varying insulation and solder pin lengths. Possibly OEM cut these and then did not use. $0.50 each plus postage.

D. Female, 4 hole mount, 0.080-inch diameter x 0.125-inch long Teflon rear stem with 0.025-inch diameter flush pin (no pin projection; appears that a very fine (0.007 inch diameter) projecting pin broke off flush

with insulator, so work with X-acto knife necessary). $0.50 each plus postage.

E. Female, 4-hole mount, no projecting rear insulation, 0.050-inch diameter x 0.195-inch long gold, solder cup pin. $0.50 each plus postage.

F. Male, 2 or 4 hole mount (specify), with stems as in D. Use to reduce connector/cable loss in connecting pre amp to antenna. Very few of these available. $1.00 each plus postage.

Please provide mailing address when ordering.

John Anderson WD4MUO/0 wd4muo@webaccess.net (303) 258-3711

Hello Microwavers, At last night's SBMS meeting I mentioned the power generator my friend had purchased. It is a Honda Model EU2000i as described in the November issue of QST. He is happy with its performance and the prompt shipment from the dealer in Iowa. The dealer's web address is: www.hicklinpower.com. 73s from Ed Munn, W6OYJ

Hi everyone, For those that were at the meeting last night and picked up a 10 MHz osc from Dave. The link to the web site has the specs for the oscillator- www.rakon.com/models then sort for the model number. (See enclosed page on the oscillator. ED) Now you will not have to tear it open to find out how to hook it up. 73's, Chris n9rin

On the November sign-in sheet there was a column for date of first license. Here is what you said: WA6QYR 1961, K6HIJ 1953, N9RIN 1992, N6CA 1959, WA6JBD 1975, K6HLH 1955, WB6DNX 1954, WA6EXV 1943, N6RMJ 1983, N6PPO 1958, K6RRA 1953, WA6NIA 1969, KJ6HZ 1987, KG6MQS 2002, N6IZW 1961, K6QPV 1957, W6OYJ 1951, KE6HPZ 1994, WA6CGR 1968, K6JEY 1957, W6YLZ yes, WB6DTA 1957, K6ODV 19xx, W6ESS 1998, and KC6QHP 1991.

Party on the hill- Sunday November 24th a group assembled to install the SBMS translator beacon on the tower at Heaps Peak, DM14kf. Chuck, WA6EXV carried all the parts he and Sam had built. Glenn, KE6HPZ came with his climbing gear and carload of tools. Dave, WA6CGR and Dick, WB6DNX carried up rolls of hardline and connectors with tools to build the transmission lines from the shack to the antennas. Bill, WA6QYR carried up rigs that had been used to control the beacon when it was under test at Chuck's house. The photographs are in work so will have to appear in next months newsletter. Around mid afternoon the antennas were in place about 30 feet up the tower leg and hardline connected them to the unit in the shack. Testing found the unit didn't like the strong 1296 MHz signal levels of rigs in the parking lot so additional attenuation was required before the decoding section understood the instructions. Many of the control functions were exercised. Chip, N6CA had strong signals in Palos Verde's. As the sun was approaching the horizon the group posed for the last picture and

headed off the hill. On the way down Chuck noticed that someone had left the machine in the data only mode. So after a quick snack at the Wendy's at the truck stop Highway 15 and 395 junction, Bill got out the 1296 rig and controlled the beacon into the full identification mode. Control operators must remember to keep in that node when complete since it is the mode with the call sign identification. The beacon has telemetry data on its internal health and inside and outside temperatures as well as a message for users and a long key down mode for tweaking home gear. The translator mode lets users communicate on 1296 input and listen on 2304 MHz output. Hopefully it will be a useful tool for microwavers. Please let Chuck know how you like it. Chuck provided some information on the operation in this newsletter. -- Bill

73's Bill

SBMS BEACON /TRANSLATOR

The plan is to install the SBMS Beacon/Translator system at Heaps Peak, DM14kf on the 24th of November.

Specifications:

Beacon Frequency: 2304.303 MHz

CW Transmission Sequence: Base Plate Temp. (F); External Temp.(F); PA Power Out (Relative)and Power Supply Output Volts (N/10) then a short message followed by a long dash.

Translator Frequency: 1296.0 to 1296.2 MHz Input

2304.6 to 2304.8 MHz Output

The measured -3dB bandwidth of the Translator is 1296.01 to 1296.24 MHz.

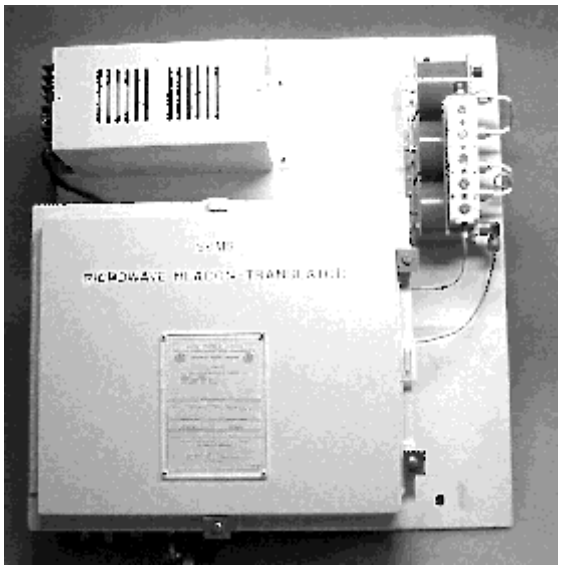
Power Output: 8 Watts (Nominally)

Polarization: Horizontal, Omni

This is a linear translator so any mode should work, however care should be taken when using FM or any mode that transmits a steady carrier to use only enough power to access the translator without overloading it. There is an AGC system, but it has a limited range.

Based on sensitivity measurements made in my laboratory, a station that is located 60 miles away with a clear view of Heaps Peak should be able to access the translator with 10 Watts to a 12 dB antenna. This signal should bring the DTMF control receiver to full limiting.

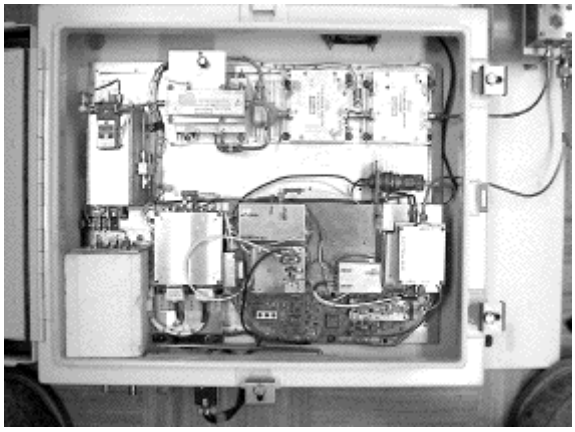
The beacon control operators have the option of turning OFF or ON the transmitter, changing the External Temp to Internal Cabinet Temp. PA Power Output to IPA Power Output and switching the default message to the string of four numbers only.



Please send me reports on how the Beacon/Translator is working at your location. chuckswed@juno.com.

73's Chuck, WA6EXV

Here is a photograph of the SBMS 1.2 to 2.4 GHz translator beacon to be installed on the wall of the building on Heaps Peak, DM14kf sometime in November. The filters on the upper right is for the 1.2 GHz receiver input and 2.4 GHz transmitter output.



This is the translator with the cover open. The power supply is on bottom left. The translator section built by Sam is in the lower portion. Chuck, WA6EXV built the control receiver, the beaconing message and signal source, and frequency translating device and 2.4 GHz power amplifier.